

WHAT IS CLAIMED IS:

1. A blower housing for a motor driven air handling blower, particularly adapted for HVAC systems, said blower housing comprising:

5 a first housing part including at least a part of an air inlet opening and at least a part of an air discharge opening formed thereby;

a second housing part including at least a part of an air inlet opening and at least a part of an air discharge opening formed thereby;

10 said housing parts being connectable to each other to form said blower housing; and

said housing parts being formed of a molded thermoset polymer composition, respectively.

2. The blower housing of Claim 1 wherein:

5 said housing parts are connectable to each other at respective peripheral edges disposed along a parting line which lies in a plane generally normal to the axis of rotation of a blower impeller adapted to be disposed in said blower housing.

3. The blower housing set forth in Claim 1 wherein:

5 one of said housing parts includes a flange disposed along a peripheral edge and the other of said housing parts includes a groove disposed along a cooperating peripheral edge for receiving said flange for locating said housing parts in predetermined positions with respect to each other.

4. The blower housing set forth in Claim 1 wherein:  
each of said housing parts includes at least one boss positioned to be adjacent a corresponding boss of the other of said housing parts when said housing parts are assembled one to the other, and said blower housing includes a clip adapted to engage said bosses to secure said housing parts to each other.

5. The blower housing set forth in Claim 4 wherein:  
said bosses are tapered toward each other and said clip includes opposed tapered flanges engageable with respective ones of said bosses for registering said clip with said bosses in a wedged condition.

6. The blower housing set forth in Claim 5 wherein:  
said clip includes a detent member operable to be disposed in a recess formed in at least one of said bosses for retaining said clip in a position for securing said housing parts to each other.

7. The blower housing set forth in Claim 4 wherein:  
said housing parts each include plural bosses spaced apart about cooperating peripheral edges of said housing parts, respective pairs of said bosses being aligned with each other when said housing parts are assembled to each other for receiving respective ones of said clips.

8. The blower housing set forth in Claim 1 wherein:  
said housing parts each include a curved outer wall joined to a curved sidewall and forming compound curved surfaces therebetween.

9. The blower housing set forth in Claim 8 wherein:  
said housing parts each include an inlet opening defined by the side wall of said housing parts, respectively, and said housing parts cooperate to provide an  
5 airflow path disposed between said inlet openings and said discharge opening which has a cross-sectional area which progressively increases toward said discharge opening.

10. The blower housing set forth in Claim 9 wherein:  
said cross-sectional area expands in a radial direction relative to an axis of rotation of a blower impeller in said housing over a first portion of said  
5 housing and a second portion of said housing is formed which expands in an axial direction relative to said axis.

11. The blower housing set forth in Claim 1 wherein:  
said thermoset composition includes a fiber reinforcement dispersed throughout said thermoset composition.

12. The blower housing set forth in Claim 11 wherein:  
said thermoset composition includes a polyester resin.

13. The blower housing set forth in Claim 11 wherein:  
said blower housing is formed by compression molding respective ones of said housing parts using said thermoset composition.

14. A blower housing for a motor driven air handling blower, said blower housing comprising:

- a first housing part;
- a second housing part;

5       said housing parts being connectable to each other along cooperating peripheral edges of said housing parts extending generally normal to an axis of rotation of a blower impeller adapted to be disposed in said blower housing; and

10       said housing parts are formed of a molded thermoset polymer composition, respectively.

15. The blower housing set forth in Claim 14 wherein:

one of said housing parts includes a flange extending along said peripheral edge of said one housing part and the other of said housing parts includes a groove  
5 disposed along said peripheral edge of said other housing part for receiving said flange for locating said housing parts in predetermined positions with respect to each other.

16. The blower housing set forth in Claim 14 wherein:

each of said housing parts includes plural spaced apart bosses positioned to be adjacent corresponding bosses of the other of said housing parts when said housing parts  
5 are assembled one to the other, and said blower housing includes respective clips adapted to engage the cooperating bosses to secure said housing parts to each other.

17. The blower housing set forth in Claim 16 wherein:

said bosses are tapered toward each other and said clips include opposed tapered flanges engageable with  
5 respective ones of said bosses for registering said clips with said bosses in a wedged condition.

18. The blower housing set forth in Claim 17 wherein:  
said clips include a detent member adapted to be  
disposed in a recess formed in at least one of said bosses  
for retaining said clip in a position for securing said  
5 housing parts to each other.

19. The blower housing set forth in Claim 14 wherein:  
said thermoset composition includes a fiber  
reinforcement dispersed throughout said thermoset  
composition.

20. The blower housing set forth in Claim 19 wherein:  
said blower housing is formed by compression  
molding respective ones of said housing parts using said  
thermoset composition.

21. A blower housing for a motor driven centrifugal  
air handling blower, said blower housing comprising:  
a first housing part including at least a part of  
an air inlet opening and at least a part of an air discharge  
5 opening;

a second housing part including at least a part of  
an air inlet opening and at least a part of an air discharge  
opening;

each of said housing parts includes a boss located  
10 to be adjacent a corresponding boss of the other of said  
housing parts when said housing parts are assembled one to  
the other; and

a removable clip adapted to engage said bosses to  
secure said housing parts to each other.

22. The blower housing set forth in Claim 21 wherein:  
said bosses are tapered toward each other and said  
clip includes opposed tapered flanges engageable with  
respective ones of said bosses for registering said clip  
5 with said bosses in a wedged condition.

23. The blower housing set forth in Claim 21 wherein:  
said housing parts include plural bosses spaced  
apart about a peripheral edge of each of said housing parts,  
respective pairs of said bosses being aligned with each  
5 other when said housing parts are assembled to each other.

24. The blower housing set forth in Claim 21 wherein:  
said housing parts are each formed of a  
compression molded reinforced thermoset composition.

25. A method of assembling an air handling blower comprising a motor, a support bracket for connecting said motor to a blower housing, an impeller wheel adapted to be connected to an output shaft of said motor and opposed  
5 housing parts adapted to be joined along cooperating edges, said method comprising the steps of:

providing a fixture for supporting at least one of said motor and said support bracket;

providing fastener driving tools for driving  
10 fasteners for securing said support bracket to one of said housing parts;

mounting said support bracket on said fixture;

mounting one of said housing parts on said support  
bracket;

15 driving fasteners to connect said support bracket to said one of said housing parts;

mounting said impeller on an output shaft of said  
motor;

mounting the other of said housing parts on said  
20 one housing part; and

securing said housing parts together to form said  
blower.

26. The method set forth in Claim 25 wherein:

said housing parts are provided with cooperating  
bosses which are registrable with each other when said  
housing parts are connected, and said method includes the  
5 step of:

connecting said housing parts together with a  
fastener engagable with said bosses, respectively.

27. The method set forth in Claim 26 wherein:

said fastener comprises a clip slidably engageable with said bosses on said housing parts to secure said housing parts to each other.

28. The method set forth in Claim 25 including the steps of:

mounting said motor on said fixture with its output shaft projecting substantially vertically upward and  
5 lowering said one housing part over said motor and into engagement with said support bracket prior to driving said fasteners to secure said motor and said support bracket to said one housing part.

29. The method set forth in Claim 28 including the steps of:

mounting said impeller on said output shaft of said motor by lowering said impeller onto said output shaft,  
5 and locating said impeller in a predetermined position with respect to an air inlet opening formed in said one housing part.

30. The method set forth in Claim 29 including the step of:

lowering the other of said housing parts into engagement with said one housing part and with an air inlet  
5 opening in said other housing part disposed directly adjacent said impeller.

31. The method set forth in Claim 25 including the step of:

forming said housing parts of a reinforced thermoset composition, respectively.



32. The method set forth in Claim 31 including the step of:

forming said housing parts by compression molding said thermoset composition.